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PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: A8643

SUN, Yudong

Appln. No.: 09/512,560

Group Art Unit: 2178

Confirmation No.: 6032

Examiner: Basehoar, Adam L.

Filed: February 24, 2000

For: **SERVER-SIDE HTML CUSTOMIZATION BASED ON STYLE SHEETS AND
TARGET DEVICE**

SUBMISSION OF APPEAL BRIEF

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. A check for the statutory fee of \$330.00 is attached. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,

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WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: September 21, 2004



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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

I. REAL PARTY IN INTEREST

The real party in interest is INTERNATIONAL BUSINESS MACHINES

CORPORATION by virtue of an assignment executed by Yudong Sun (Appellant, hereafter), on

February 16, 2000.

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II. RELATED APPEALS AND INTERFERENCES

To the best of the knowledge and belief of Appellant, the Assignee and the undersigned, there are no other appeals or interferences before the Board of Appeals and Interferences (“the Board”) that will directly affect or be affected by the Board’s decision in the present Appeal.

III. STATUS OF CLAIMS

Claims 1-30 are all the claims pending in the application and are the claims on appeal herein.

Claims 1-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over W3C's "Introduction to CSS2," (<http://www.w3.org/TR/REC-CSS2/intro.html#processing-model>); hereinafter "*Intro to CSS2*") in view of *Hill et al.* (US 6,023,714; hereinafter "*Hill*").

IV. STATUS OF AMENDMENTS

A Request for Reconsideration Under 37 C.F.R. § 1.116 was filed on June 21, 2004, in response to the final Office Action dated April 21, 2004. No amendment was filed subsequent to the final rejection.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

(V)(I) General Description

Appellant's invention is directed to a system and method for the server-side customization of an HTML document for viewing on a target device based upon style sheets.

(V)(II) Relevant Technology

Web browsers can retrieve and display documents that are stored on web servers. These documents are generally authored in hypertext markup language ("HTML"). *See App.*, pg. 1.

In addition to personal computers ("PCs"), web browsers can be provided on many types of portable electronic devices such as a personal data assistant ("PDA") or a mobile phone. However, since the screen size, display quality, resolution, bandwidth, etc. of these portable devices may be less than that of a PC, the portable devices cannot display a document in the same format that a PC can. Thus, specially modified web pages are typically required for such portable devices. *See App.*, pg. 2.

To provide such specially modified web pages, style sheets have been developed. These style sheets set rules that define the formatting of a document, and are applied to the document before it is displayed. The style sheets modify the appearance of a document so that it can most easily be displayed on (for example) a particular client, such as the portable devices discussed above. *See App.*, pg. 3.

These style sheets are normally processed by the web browser, at the client side (*i.e.*, at the PC). This is because the style sheet should be applied to a document after it has been parsed (*i.e.*, broken up into a data tree), and web browsers generally contain parsers, as parsing is a normal step in the display of a document. Further, web servers do not generally contain parsers,

as such elements are not required to deliver web pages to a web browser at a client. *See App.*, pg. 4.

Unfortunately, many Web browsers do not support style sheet processing. For example, a PDA browser typically has limited memory and a smaller CPU, which limits the amount of processing (such as that required to apply style sheets) that the PDA may perform. *See App.*, pg. 4.

(V)(III) Summary of Claimed Subject Matter

Accordingly, to ensure that properly formatted documents can be viewed on client devices that do not support style sheet processing, style sheet processing on the server side would be desirable, and is described below.

As a matter of example to more fully explain the invention, Appellant will describe the server side style sheet processing system and method shown in the exemplary embodiment of the invention, which is illustrated in FIGS. 1-8 and described in detail on pages 13-22 of the Specification. Portions of independent claims 1, 11 and 21 that correspond to the features shown in the exemplary embodiment are also referenced during this discussion, per USPTO requirements. This discussion of the exemplary embodiment and the pending claims is provided for explanatory purposes only, and is not intended to limit the scope of the claims in any way.

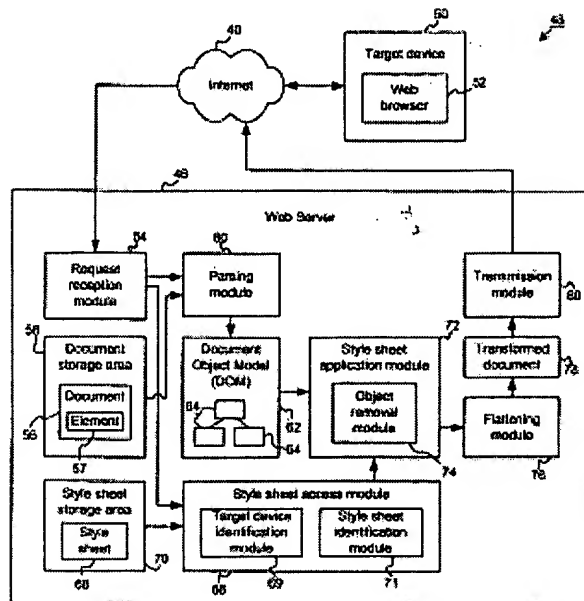


Fig. 2

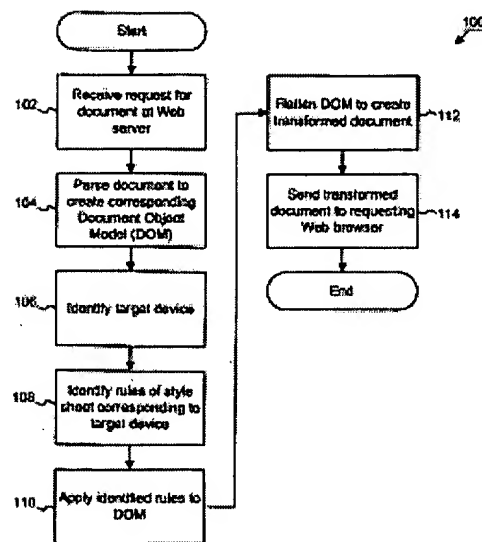


Fig. 3

Figure 2 illustrates a web server 46 and a target device (*i.e.*, a client) 50 with a web browser 52. The web server 46 is configured to store and customize documents for sending to a target device 50 via the internet 40. The following portions of the independent claims read on this general arrangement.

Claim 1

1. Within a document server, a computer-implemented method for customizing a requested document comprising at least one hypertext markup language (HTML) element, the method comprising...

Claim 11

11. A system for customizing a requested document for sending to a target device comprising at least one hypertext markup language (HTML) element, the system comprising...

Claim 21

21. An article of manufacture comprising a program storage medium readable by a processor and embodying one or more instructions executable by the processor to perform a computer-implemented method for customizing a requested document for sending to a target device comprising at least one hypertext markup language (HTML) element, the method comprising...

Turning back to Figure 2, request reception module 54 is arranged to receive a request, from web browser 52, for a document 56 stored in storage area 58 of the web server 46. Parsing module 60 then retrieves document 56 and parses the document 56 to provide a Document

Object Model ("DOM") 62 (*i.e.*, a parse tree). See also steps 102 and 104 in Figure 3. The following portions of the independent claims read on this arrangement.

<i>Claim 1</i>	<i>Claim 11</i>	<i>Claim 21</i>
... parsing the document to generate therefrom a corresponding document object model (DOM) including at least one object; a parsing module configured to parse the document to generate therefrom a corresponding document object model (DOM) including at least one object; parsing the document to generate therefrom a corresponding document object model (DOM) including at least one object; ...

Style sheet access module 66 then retrieves a style sheet 68 that includes rules to display the document 56 on the target device 50. Target device identification module may also be arranged in web server 46 to identify the type of target device 50. Style sheet application module then applies the rules of style sheet 68 to DOM 62. See also steps 106, 108 and 110 of Figure 3.

The following portions of the independent claims read on this arrangement.

<i>Claim 1</i>	<i>Claim 11</i>	<i>Claim 21</i>
... obtaining a style sheet including at least one rule directed to a target device;	... a style sheet access module configured to obtain a style sheet including at least one rule directed to the target device;	... obtaining a style sheet including at least one rule directed to the target device;
applying the at least one rule of the style sheet to the DOM; and ...	a style sheet application module configured to apply the at least one rule of the style sheet to the DOM; and ...	applying the at least one rule of the style sheet to the DOM; and ...

A flattening module 76 then flattens DOM 62 to generate a transformed document 78, which may then be sent to the web browser 52 and displayed. See steps 112 and 114 of Figure 3.

The following portions of the independent claims read on this arrangement.

<i>Claim 1</i>	<i>Claim 11</i>	<i>Claim 21</i>
... flattening the DOM to generate therefrom a corresponding transformed document suitable for display by the target device.	... a flattening module configured to flatten the DOM to generate therefrom a corresponding transformed document suitable for display by the target device.	... flattening the DOM to generate therefrom a corresponding transformed document suitable for display by the target device.

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Whether or not claims 1-30 are unpatentable over *Intro to CSS2* in view of *Hill*, under 35

U.S.C. § 103(a).

VII. ARGUMENTS

As indicated above, the Examiner has rejected all of the pending claims, including independent claims 1, 11 and 21, as allegedly being unpatentable over *Intro to CSS2* in view of *Hill*.

The Applied References

Intro to CSS2 discloses, in section 2.3 entitled “The CSS2 processing model,” that a “user agent” (*i.e.*, a client application): (1) parses the source document and creates a document tree; (2) identifies the media type; (3) retrieves style sheets; (4) annotates elements of the document tree; (5) generates a formatting structure; and (6) transfers the formatting structure to the target medium.

Thus, *Intro to CSS2* discloses a system wherein a client computer applies style sheets to a parsed source document, which is similar to the deficient “relevant technology” discussed above. Accordingly, the system disclosed in *Intro to CSS2* would suffer from the same problems as the “relevant technology” of the Application, *i.e.*, many “user agents” (*i.e.*, web browsers) do not support style sheets.

Hill discloses a system for dynamically adapting the layout of a document to a particular display device (*see* Abstract). More specifically, *see* FIG. 2, a client 204 renders a document 210 obtained from server 208 on an output device 200 using a presentation component, such as a web browser 206 (col. 9, lines 14-18). The document 210 contains a layout generator 212 that interrogates the display device 200 and selects a style sheet 214 based upon the capabilities of the display device 200. (col. 9, lines 23-26). Once the correct style sheet 214 is selected, the

style sheet and document are transmitted to the client 204, and the client 204 uses the style sheet to render the document 210 on the display device 200 (col. 9, lines 50-54).

Thus, although a specific style sheet is chosen by the layout generator 212, the style sheet is not applied to the document 210 in server 208, but is rather applied to the document by client 204, as shown by steps 414 and 512 in FIGS. 4 and 5, respectively (reproduced to the right).

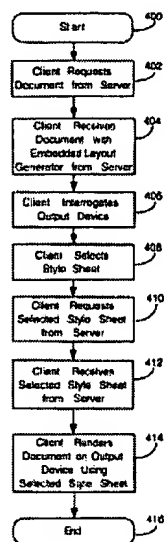


Fig. 4

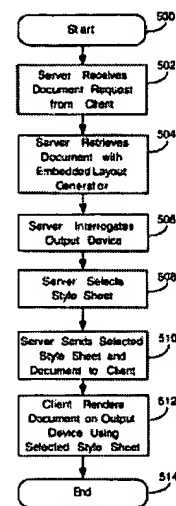


Fig. 5

The Current Rejection

In the Final Office Action, it is alleged that *Intro to CSS2* discloses many of the features recited in independent claims 1, 11 and 21. However, the Final Office Action also acknowledges that *Intro to CSS2* fails to teach or suggest “that customizing a requested document is done on the server side” (O.A., pg. 3). Appellant agrees that *Intro to CSS2* is deficient, at least in this regard.

Nevertheless, in an attempt to show that these claimed features were known, the Examiner applies *Hill*, taking the position that this reference discloses “that customizing the requested document can be done on the server side as well as the client side (column 2, lines 30-34)” (O.A., pg. 3, lines 6-8). Further, the Examiner alleges that “it would have been obvious to one of ordinary skill in the art, to have customized a requested HTML document for [a] target

device on the server side, because it was well known in the art that some end-user client devices do not support cascading style-sheet processing. (O.A., pg. 3, lines 8-10).

No Reasonable Combination of Intro to CSS2 and Hill Teaches or Suggest The Features of the Independent Claims

Appellants respectfully submit that, even if it were possible to modify *Intro to CSS2* with *Hill* as the Examiner has alleged, the resultant combination would still fail to teach or suggest any application of any rule of a style sheet to a document or DOM in a “document server” (claim 1), or in a “system for customizing a requested document for sending to a target device” (claim 11) or in a “a program storage medium” embodying instructions to perform a “method for customizing a requested document for sending to a target device”(claim 22).

Specifically, as noted above, the Examiner concedes that *Intro to CSS2* is deficient with respect to such features. Thus, *Hill* must teach or suggest such features in order to support the current rejection.

However, as discussed above, *Hill* is also deficient with respect to any teaching or suggestion of any server side customization. Rather, *Hill* discloses the application of a style sheet to a document 210 in client 204 (see above).

In fact, the portion of *Hill* cited by the Examiner as allegedly supporting the rejection (col. 2, lines 30-34) merely discloses that “[t]ypically, the document is an HTML document that includes embedded tags to define the structural elements of the document. The layout generator may be executed by either the client or the server.” However, the Examiner’s focus on the layout generator of *Hill* is incorrect, as the layout generator merely selects, but does not apply, style sheets. *Hill* is very clear that, the actual application of that style sheet to the requested

document is performed on the client side.¹ As the style sheets are not applied to the document in the server, no server side customization takes place in *Hill*.

The Examiner seems to also correctly concede that *Hill* is deficient in this regard, as, in the “Response to Arguments” section of the Final Office Action, the Examiner states that he “agrees with the Appellant that within [*Hill*] server side processing is not explicitly shown” (O.A., pg. 6, lines 2-3). However, the Examiner then curiously maintains that “server-side processing of the style-sheet for the target device would clearly have been an obvious alternative embodiment (column 13, lines 16-18) to [*Hill*], especially in light of the Examiner’s provided motivation to combine.”²

Appellant respectfully disagrees.

First, the further portion of *Hill* now cited by the Examiner (col. 13, lines 16-18) is only a vague indication that “[a]lternative embodiments will become apparent to those skilled in the art to which the present invention pertains without departing from its spirit and scope.” Such a disclosure cannot reasonably be cited as providing any support for modifying the specific teachings of *Hill* to provide directly opposite functionality.

Further, as noted above, the Final Office Action fails to identify a single portion of *Hill* that teaches or suggests any application of any rule of a style sheet to a document or DOM in a “document server” (claim 1), or in a “system for customizing a requested document for sending

¹ Steps 414 and 512 in FIGS. 4 and 5, respectively, and also col. 3, lines 9-20 of *Hill* indicate, *inter alia*, that the “server sends the document and the selected style sheet to the client and the client renders the document on the output device using the selected style sheet.”

² Appellant also submits that the new document “brought in” by the Examiner, “Getting Started with Cascading Style Sheets,” is not prior art to this Application.

to a target device” (claim 11) or in a “a program storage medium” embodying instructions to perform a “method for customizing a requested document for sending to a target device” (claim 21).

Therefore, the Final Office Action cannot reasonably support the position that independent claims 1, 11 and 21 are obvious, because “to establish *prima facie* obviousness of the claimed invention, all the claim limitations must be taught or suggested by the prior art.” *In re Royka*, 490 F.2d 981 (CCPA 1974).

Here, it is clear that the entire concept of application of a style sheet to a document (DOM) prior to sending it to a target device (client) is completely missing from *Hill* (and *Intro to CSS2*), and that, in fact, *Hill* discloses a completely opposite configuration.

Further, it is also clear that the alleged “motivation” stated in the Office Action cannot be used to supply such missing features. Rather, the features must be taught or suggested by the prior art to support an obviousness rejection.

Thus, Appellant respectfully submits that independent claims 1, 11 and 21 are patentable over the applied references. Further, Appellant respectfully submits that rejected dependent claims 2-10, 12-20 and 22-30 are allowable, *at least* by virtue of their dependency.

Thus, Appellant respectfully requests the withdrawal of this rejection.

VIII. CONCLUSION

In view of the foregoing differences between appealed claims 1-30 and the cited references, the Appellant respectfully submits that appealed claims 1-30 are patentable over *Intro to CSS2, Hill* or any reasonable combination thereof. Thus, claims 1-30 are believed to be allowable over these references.

Unless a check is submitted herewith for the fee required under 37 C.F.R. §41.37 and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: September 21, 2004

CLAIMS APPENDIX

CLAIMS 1-30 ON APPEAL:

1. (Original) Within a document server, a computer-implemented method for customizing a requested document comprising at least one hypertext markup language (HTML) element, the method comprising:

 parsing the document to generate therefrom a corresponding document object model (DOM) including at least one object;

 obtaining a style sheet including at least one rule directed to a target device;

 applying the at least one rule of the style sheet to the DOM; and

 flattening the DOM to generate therefrom a corresponding transformed document suitable for display by the target device.

2. (Original) The method of claim 1, wherein the style sheet comprises a cascading style sheet (CSS).

3. (Original) The method of claim 1, wherein the obtaining step comprises:

 identifying a target device for displaying the document; and

 identifying at least one rule of a style sheet directed to the identified target device.

4. (Original) The method of claim 3, further comprising:

 receiving a request for a document from a client program.

5. (Original) The method of claim 4, wherein the client program comprises a Web browser.

6. (Original) The method of claim 1, wherein the style sheet includes rules directed to at least two different target devices.

7. (Original) The method of claim 1, wherein the style sheet is stored within a separate portion of the document.

8. (Original) The method of claim 1, wherein the style sheet and the document are stored as logically separate data files.

9. (Original) The method of claim 1, further comprising:
transmitting the transformed document to a client program.

10. (Original) The method of claim 1, the transforming step comprising:
removing at least one object of the DOM in response to an indication within the style sheet to remove a corresponding HTML element from the document.

11. (Previously Presented) A system for customizing a requested document for sending to a target device comprising at least one hypertext markup language (HTML) element, the system comprising:

a parsing module configured to parse the document to generate therefrom a corresponding document object model (DOM) including at least one object;

a style sheet access module configured to obtain a style sheet including at least one rule directed to the target device;

a style sheet application module configured to apply the at least one rule of the style sheet to the DOM; and

a flattening module configured to flatten the DOM to generate therefrom a corresponding transformed document suitable for display by the target device.

12. (Original) The system of claim 11, wherein the style sheet comprises a cascading style sheet (CSS).

13. (Original) The system of claim 11, wherein the style sheet access module comprises:

a target device identification module configured to identify a target device for displaying the document; and

a style sheet identification module configured to identify at least one rule within a style sheet directed to the identified target device.

14. (Original) The system of claim 13, further comprising:

a request reception module configured to receive a request for a document from a client program.

15. (Original) The system of claim 14, wherein the client program comprises a Web browser.

16. (Original) The system of claim 11, wherein the style sheet includes rules directed to at least two different target devices.

17. (Original) The system of claim 11, wherein the style sheet is stored within a separate portion of the document.

18. (Original) The system of claim 11, wherein the style sheet and the document are stored as logically separate data files.

19. (Original) The system of claim 11, further comprising:
a transmission module configured to transmit the transformed document to a client program.

20. (Original) The system of claim 11, wherein the style sheet application module comprises:

an object removal module configured to remove at least one object of the DOM in response to an indication within the style sheet to remove a corresponding HTML element from the document.

21. (Previously Presented) An article of manufacture comprising a program storage medium readable by a processor and embodying one or more instructions executable by the processor to perform a computer-implemented method for customizing a requested document for sending to a target device comprising at least one hypertext markup language (HTML) element, the method comprising:

parsing the document to generate therefrom a corresponding document object model (DOM) including at least one object;

obtaining a style sheet including at least one rule directed to a the target device;

applying the at least one rule of the style sheet to the DOM; and

flattening the DOM to generate therefrom a corresponding transformed document suitable for display by the target device.

22. (Original) The article of manufacture of claim 21, wherein the style sheet comprises a cascading style sheet (CSS).

23. (Original) The article of manufacture of claim 21, wherein the obtaining step comprises:

identifying a target device for displaying the document; and
identifying at least one rule of a style sheet directed to the identified target device.

24. (Original) The article of manufacture of claim 23, the method further comprising: receiving a request for a document from a client program.

25. (Original) The article of manufacture of claim 24, wherein the client program comprises a Web browser.

26. (Original) The article of manufacture of claim 21, wherein the style sheet includes rules directed to at least two different target devices.

27. (Original) The article of manufacture of claim 21, wherein the style sheet is stored within a separate portion of the document.

28. (Original) The article of manufacture of claim 21, wherein the style sheet and the document are stored as logically separate data files.

29. (Original) The article of manufacture of claim 21, the method further comprising: transmitting the transformed document to a client program.

30. (Original) The article of manufacture of claim 21, the transforming step comprising:
removing at least one object of the DOM in response to an indication within the style sheet to remove a corresponding HTML element from the document.

Appeal Brief Under 37 C.F.R. § 41.37
U.S. Appln. No.: 09/512,560

Attorney Docket # A8643 /
ST9-99-153

EVIDENCE APPENDIX

N/A

Appeal Brief Under 37 C.F.R. § 41.37
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Attorney Docket # A8643 /
ST9-99-153

RELATED PROCEEDINGS APPENDIX

N/A